

DETAILED ACTION

Claims 1-20, 25-35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 166, 167, 172-174, 180, 181, 228 and 229. are pending in the application. Claims 1-20, 25-35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 166, 167, 173-174, 180, 181, 228 and 229 are rejected. Claim 172 is objected to.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 6th, 2010 has been entered.

Response to Amendment/Arguments

Applicant's arguments, see page 94 of the response, filed April 6th, 2010, with respect to the rejection of claims 159-162 under 35 USC 112 2nd paragraph as indefinite have been fully considered and are persuasive. The rejection of claims 159-162 under 35 USC 112 2nd paragraph as indefinite on the grounds set forth in the action dated 10/14/2009 has been withdrawn.

Information Disclosure Statement

The Examiner has considered the Information Disclosure Statement(s) filed on April 6th, 2010.

Claim Objections

In lines 2 of claim 29, the phrase "selected from the group consisting of a diarylmethane dyes" should be amended to delete the word "a". Furthermore in claim 29 (line 4) the multiple uses of the word "and" should be avoided to conform to standard Markush language, i.e. the word "and" should only be used to separate the last two members of the group.

In claim 94, the phrase "wherein halo-substituted diarylketone" should be changed to "wherein halo-substituted diarylketones".

Claim 229 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 229 recites that "the phthalhydrazide is selected from the group consisting of" followed by a list of groups which include non-phthalhydrazide moieties.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20, 25-35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 166, 167, 173-174, 180, 181, 228 and 229 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are indefinite since claim 1 recites "A is a chemiluminescent moiety comprising a phthalhydrazide". The metes and bounds of the definition of A cannot be clearly determined from the instant language. Applicant merely recites that this portion of the structure comprises a certain functional group. Claims of the "dangling valence" type in which only the portion of the structure responsible for the activity is defined in the claim are indefinite because the claims are of indeterminate in scope and generally broader than any possible supporting disclosure. Ex parte Diamond, 123 USPQ 167 and Ex parte Pedlow, 90 USPQ 39.

Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are further indefinite since claim 1 recites "B is an energy accepting moiety". Such language similarly renders the claims indefinite since Applicant has only defined the compound in terms of a property without any

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limit on what the structure may be. Furthermore, Applicant has failed to provide a clear definition for "energy" in the instant specification. Does energy include any type of energy such as infrared, visible, ultraviolet, etc.? Any type of molecule can accept energy if it is kinetic energy. Therefore, absent a proper definition, the limitation of "an energy accepting moiety" renders the claims indefinite.

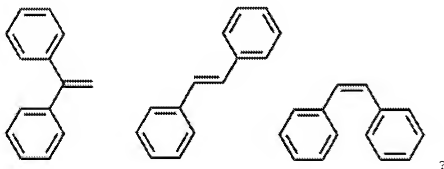
Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are further indefinite since claim 1 recites "C is a biologically active moiety comprising a nucleophilic moiety." The phrase instantly noted also includes open-ended language when defining the instant structure and renders the claims indefinite because the claims are of indeterminate in scope and broader than any possible supporting disclosure. Applicant has not provided any definition for what constitutes a biologically active moiety. Do water and oxygen qualify as biologically active moieties? The metes and bounds of the claims cannot readily be discerned since Applicant has failed to provide a clear delineation of the structure of the instant compound. Applicant merely provides examples of biologically active compounds in the instant case without describing the boundaries on the instant scope of invention.

Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are further indefinite since claim 1 recites the limitation of "phthalhydrazide precursor". The metes and bounds of this limitation cannot be clearly understood from the instant application. What qualifies a phthalhydrazide precursor? Can it be any molecule that could eventually be converted to phthalhydrazide? Does N2 qualify as a precursor since nitrogen could react with benzene-1,2-dicarboxylic acid to yield phthalhydrazide? The limitation of a "phthalhydrazide precursor" renders the instant claims indefinite since it is unclear how closely related the precursor must be to

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the end product in order to qualify as a precursor reading on the instant claims.

Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are further indefinite since claim 1 recites the limitation of a "diaryl ethylene". The instant limitation renders the claims indefinite since the structural metes and bounds of the recited compound have not been clearly defined. Does diaryl ethylene include all of the following structures:



Furthermore, does the aryl also include heteroaryl rings? In addition, how may the "diaryl ethylene" structure be further substituted, if at all?

Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are further indefinite since claim 1 recites the limitations of a "phthalhydrazide-precursor-ethylene conjugate," a "phthalhydrazide-precursor-ethylene-pentadiene conjugate," "a carrier compound," "unprotected carrier compound," and a "protected phthalhydrazide precursor pentadiene conjugate" where the noted limitations are a combination of moieties which the examiner has already indicated as indefinite. Accordingly, the combination of such indefinite moieties yields an indefinite product. The structural limitations of such conjugates cannot be clearly discerned from the instant claims or definitions in the specification.

Note: dependent claims 2-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 do not remedy the indefiniteness of the limitations

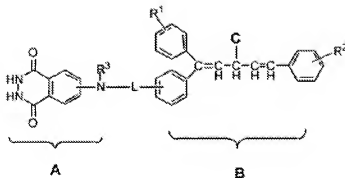
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discussed in the preceding paragraphs. These claims set forth limitations too numerous to discuss individually to describe the compounds used at each step in the synthetic procedures; however, Applicant's language does not clearly set the metes and bounds of the structures of the compounds instantly recited. As noted above, claims of the "dangling valence" type in which only the portion of the structure responsible for the activity is defined in the claim are indefinite because the claims are of indeterminate in scope and generally broader than any possible supporting disclosure. Ex parte Diamond, 123 USPQ 167 and Ex parte Pedlow, 90 USPQ 39. In the instant case, Applicant merely sets forth core functionalities and does not clearly define the bounds of the compounds within the instant claims.

Claims 1-19, 31, 35, 37, 38, 71, 72, 76, 77, 79-124, 128-164, 228 and 229 are further indefinite since in claim 1, Applicant states that "wherein A is phthalhydrazide [sic], B is pentadiene and C is a biologically active moiety comprising a nucleophilic moiety." It is unclear if Applicant is stating that A is unsubstituted phthalhydrazide bound directly to pentadiene or whether Applicant intends to recite that these moieties may be further substituted. It appears from the dependent claims that Applicant intends to recite that A and B merely comprise the structural moieties recited. If this is the case (which the examiner has assumed for the purposes of this action), the claims are indefinite for the same reasons that the limitations of "A is a chemiluminescent moiety comprising a phthalhydrazide" and "B is an energy accepting moiety" are indefinite since the metes and bounds of the structures are still indefinite. If Applicant intends that A and B are unsubstituted phthalhydrazide and pentadiene, respectively, then a significant number of claims fail to further limit claim 1, since for instance, claim 76 recites

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the following structural formula where A and B are not simply phthalhydrazide and pentadiene:



Claims 3-7 are further indefinite since claims 3-6 recite the limitation of "the compound." Applicant has provided proper antecedent basis for this limitation. In claim 1, Applicant recites "chemical compound of the formula A-B-C," "carrier compound," "protected carrier compound" and "unprotected carrier compound." It is unclear which compound Applicant is referring to.

Claim 5 is further indefinite since claim 5 recites the limitation of a "hepatitis-linked" virus. It is unclear what Applicant intends to cover by such a limitation. Is hepatitis B a hepatitis-linked virus? It would not seem to be so since "linked" seems to imply a connection from a distance so it would appear that the hepatitis viruses would not be claimed; however, it is unclear what other viruses are linked to hepatitis. How are the viruses linked, by frequent co-infection with hepatitis, by structure, by biological pathways or something different? The scope of hepatitis-linked viruses is indefinite.

Claim 11 is further indefinite since claim 11 recites the limitation that "the pharmaceutical agent is at least one agent selected from [...]". Such language implies that agent can be more than one at the same time, which claims 10 and 1 do not appear to recite. It is unclear how the pharmaceutical

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agent can be more than one agent. It is unclear whether multiple agents may be attached to the core or whether two agents are to be attached to each other.

Claim 16 is further indefinite since claim 16 recites the limitation "the target cell" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claims 20, 25-30, 32-34, 166-167, 173-174 and 180 are indefinite since claim 20 recites "A is a chemiluminescent moiety selected from the group consisting of phthalhydrazides, sulfonyloxamides and active oxalates". The metes and bounds of the definition of A cannot be clearly determined from the instant language. Applicant merely recites that this portion of the structure contains certain functional groups. Claims of the "dangling valence" type in which only the portion of the structure responsible for the activity is defined in the claim are indefinite because the claims are of indeterminate in scope and generally broader than any possible supporting disclosure. Ex parte Diamond, 123 USPQ 167 and Ex parte Pedlow, 90 USPQ 39.

Claims 20, 25-30, 32-34, 166-167, 173-174 and 180 are further indefinite since claim 20 recites "B is an energy accepting moiety". Such language similarly renders the claims indefinite since Applicant has only defined the compound in terms of a property without any limit on what the structure may be. Furthermore, Applicant has failed to provide a clear definition for "energy" in the instant specification. Does energy include any type of energy such as infrared, visible, ultraviolet, etc.? Any type of molecule can accept energy if it is kinetic energy. Therefore, absent a proper definition, the limitation of "an energy accepting moiety" renders the claims indefinite.

Claims 20, 25-30, 32-34, 166-167, 173-174 and 180 are further indefinite since claim 20 recites "C is a biologically active moiety comprising a nucleophilic moiety." The phrase instantly noted also includes open-ended language when defining the instant structure and renders the claims indefinite because the claims are of indeterminate in scope and broader than any possible supporting disclosure. Applicant has not provided any definition for what constitutes a biologically active moiety. Do water and oxygen qualify as biologically active moieties? The metes and bounds of the claims cannot readily be discerned since Applicant has failed to provide a clear delineation of the structure of the instant compound. Applicant merely provides examples of biologically active compounds in the instant case without describing the boundaries on the instant scope of invention.

Note: dependent claims 20, 25-30, 32-34, 166-167, 173-174 and 180 do not remedy the indefiniteness of the limitations discussed in the preceding paragraphs. These claims set forth limitations too numerous to discuss individually to describe the compounds used at each step in the synthetic procedures; however, Applicant's language does not clearly set the metes and bounds of the structures of the compounds instantly recited. As noted above, claims of the "dangling valence" type in which only the portion of the structure responsible for the activity is defined in the claim are indefinite because the claims are of indeterminate in scope and generally broader than any possible supporting disclosure. Ex parte Diamond, 123 USPQ 167 and Ex parte Pedlow, 90 USPQ 39. In the instant case, Applicant merely sets forth core functionalities and does not clearly define the bounds of the compounds within the instant claims.

Claim 29 is further indefinite since claim 29 recites the limitation that "the cationic dye is at least one dye selected from [...]". Such

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language implies that the dye can be more than one at the same time, which claims 28 and 25 do not appear to recite. It is unclear how the cationic dye can be more than one dye. It is unclear whether multiple dyes may be attached to the core or whether two dyes are to be attached to each other.

Claim 29 is further indefinite since claim 29 recites the limitation of "other related dyes." Applicant has not provided clear guidance in how dyes should be related such that are within the scope of the instant claims. For instance, are the dyes related by absorption, by structure or by some other properties? The metes and bounds of "other related dyes" cannot be readily discerned in the instant application.

Claim 30 is further indefinite since claim 30 recites the limitation that "the cationic dye is at least one dye selected from [...]". Such language implies that the dye can be more than one at the same time, which claims 28 and 25 do not appear to recite. It is unclear how the cationic dye can be more than one dye. It is unclear whether multiple dyes may be attached to the core or whether two dyes are to be attached to each other.

Claim 30 is further indefinite since on Applicant labeled page 12 of the claim set dated 04/06/2010, several limitations starting with:

^a Only the cyanide, bisulfite, and hydroxide ions are considered, regardless of the other anions present in the solution

^b More detailed descriptions of the compositions of photochromic materials tested are given in Macnair's review [255; tables 1A-4]

^c Ethanol

^d Diethyl ether

^e 1,2-Dichloroethane

^f 1,1-Dichloroethane, cyclohexane-1,1-dichloroethane, or cyclohexane-1,2-dichloroethane mixtures

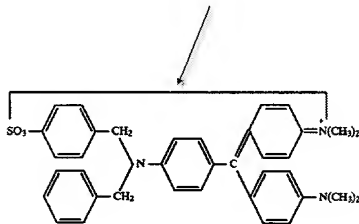
^g Benzene

^h Dimethylsulfoxide, neat and aqueous

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are recited with no indication of what they are supposed to be referring to. These limitations continue onto page 14 and it is unclear why the limitations are present in the instant claim.

Claim 30 is further indefinite since it includes several structures which appear to have impossibly strained bonds. For instance, on Applicant labeled page 26, the following structure is depicted:



The bond noted by the arrow results in indefiniteness since it is unclear whether the bond is depicted an inner salt or a bond. The nitrogen has five bonds but only one plus charge. See also "aniline blue" on page 27, "wool violet 4 EM" and "Light Green SF Yellowish" on page 28, etc. throughout the claim.

Claims 76 and 77 are further indefinite since claims 76 and 77 recite the limitation of "the compound." Applicant has provided proper antecedent basis for this limitation. In claim 1, Applicant recites "chemical compound of the formula A-B-C," "carrier compound," "protected carrier compound" and "unprotected carrier compound." It is unclear which compound Applicant is referring to.

Claim 79 is further indefinite since claim 79 recites the limitation that "wherein C is of the formula of at least one of [...]". Such language

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implies that the C group can be more than one at the same time, which claim 1 does not appear to recite. It is unclear how the C group can be more than one moiety. It is unclear whether multiple agents may be attached to the core or whether two agents are to be attached to each other.

Claim 79 is further indefinite since claim 79 recites "A-B comprises the formula of at least one [...]". The metes and bounds of the definition of A-N cannot be clearly determined from the instant language. Applicant merely recites that this portion of the structure comprises a certain functional group. Claims of the "dangling valence" type in which only the portion of the structure responsible for the activity is defined in the claim are indefinite because the claims are of indeterminate in scope and generally broader than any possible supporting disclosure. Ex parte Diamond, 123 USPQ 167 and Ex parte Pedlow, 90 USPQ 39. Furthermore, it is unclear how the A-B group can be more than one moiety. It is unclear whether multiple agents may be attached to the core or whether two agents are to be attached to each other.

Claim 80 is further indefinite since claim 80 recites the limitation of "the compound." Applicant has provided proper antecedent basis for this limitation. In claim 1, Applicant recites "chemical compound of the formula A-B-C," "carrier compound," "protected carrier compound" and "unprotected carrier compound." It is unclear which compound Applicant is referring to.

Claim 81 is further indefinite since claim 81 recites the limitation that "wherein hydrolyzable group [...] is at least one of [...]". Such language implies that the hydrolyzable group can be more than one at the same time, which claim 1 does not appear to recite. It is unclear how the hydrolyzable group can be more than one moiety.

Claim 82 is further indefinite since claim 82 recites the limitation "the aminophthalimide-substituted precursors for the dye" in lines 1-2.

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There is insufficient antecedent basis for this limitation in the claim.

Claim 1 does recite such a limitation.

Claim 83 is further indefinite since claim 83 recites the limitation "the aminophthalimide" in lines 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claim 83 is further indefinite since claim 83 recites the limitation "the aminophthalimide-substituted precursors for the dye" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claims 84-85 are further indefinite since claim 84 recites the limitation "the amino-substituted dye" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claim 86 is further indefinite since claim 86 recites the limitation "the aminophthalimide-attached dye" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claims 87-89 are further indefinite since claim 87 recites the limitation "the aminophthalhydrazide" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claim 88 is further indefinite since claim 88 recites the limitation "phthalimide-B conjugate" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 87 does recite such a limitation.

Claim 91 is further indefinite since claim 91 recites the limitation "the aminophthalimide" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claims 90 and 1 do recite such a limitation.

Claim 92 is further indefinite since claim 92 recites the limitation "the aminophthalimide-B conjugate" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Claims 90, 91 and 1 do recite such a limitation.

Claim 93 is further indefinite since claim 93 recites the limitation "the aminophthalhydrazide precursor" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claim 93 is further indefinite since claim 93 recites the limitation "the conjugate to form A-B" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does recite such a limitation.

Claims 94-95 are further indefinite since they refer to the preparation of functional groups (diaryl ketones) that are not presently recited in claim 1. It is unclear how the steps of claims should be incorporated into the process of claim 1.

Claim 96 is further indefinite since claim 96 recites the limitation "the aminophthalimide-substituted 1,1,-diarylthene" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claims 95 and 1 do recite such a limitation.

Claim 97 is further indefinite since claim 97 recites the limitation "the ethene" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claims 1, 96 and 95 do recite such a limitation.

Claim 97 is further indefinite since claim 97 recites the limitation "the aminophthalimide-substituted tetraarylpolyimethine dye" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claims 1, 96 and 95 do recite such a limitation.

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Claim 99 is further indefinite since claim 99 recites the limitations "the phthalimide-B conjugate with a protected B moiety" in line 3 and "A-B conjugate" in the last two lines of the claim. There is insufficient antecedent basis for these limitations in the claim. Claims 1, 98, 97, 96 and 95 do recite such limitations.

Claim 101 is further indefinite since claim 101 recites the limitation "the halo-substituted tetraarylpolymer dyes" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claims 1 and 95 do recite such a limitation.

Claim 102 is further indefinite since claim 102 recites the limitation "the aminophthalimide" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claims 1, 101 and 95 do recite such a limitation.

Claim 102 is further indefinite since claim 102 recites the limitation "the alkoxide-protected aminophthalimide-substituted tetraarylpolymer dye." in line 4. There is insufficient antecedent basis for this limitation in the claim. Claims 1, 101 and 95 do recite such a limitation.

Claim 103 is indefinite since it depends from itself.

Claim 104 is indefinite since it is unclear what is meant by "general steps" and "representative formula". For instance, can the reaction conditions be altered and still be deemed to follow the same general step? Furthermore, can the substituents on the "representative formula" be modified and still be considered a method that reads on claim 104? Such language does not clearly point out the subject matter instantly covered by claim 104.

Claim 107 is further indefinite since claim 107 recites the limitation that "wherein the aryl compound [...] is at least one of [...]". Such language

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implies that the aryl compound can be more than one at the same time. It is unclear how the aryl compound can be more than one moiety.

Claim 121 is further indefinite since claim 121 recites the limitation that "wherein the precursor [...] is at least one of [...]" in two instances. Such language implies that the precursors can be more than one at the same time. It is unclear how the precursors can be more than one moiety.

Claim 129 is indefinite since it is unclear what is meant by "general steps" and "representative formula". For instance, can the reaction conditions be altered and still be deemed to follow the same general step? Furthermore, can the substituents on the "representative formula" be modified and still be considered a method that reads on claim 129? Such language does not clearly point out the subject matter instantly covered by claim 129.

Claim 130 is indefinite since it is unclear what is meant by "general steps" and "representative formula". For instance, can the reaction conditions be altered and still be deemed to follow the same general step? Furthermore, can the substituents on the "representative formula" be modified and still be considered a method that reads on claim 130? Such language does not clearly point out the subject matter instantly covered by claim 130.

Claim 131 is further indefinite since claim 131 recites the limitation "the molecular linker." There is insufficient antecedent basis for this limitation in the claim. Claim 131 only recited a "hydrocarbon linker".

Claim 133 is further indefinite since claim 133 recites the limitation that "wherein the aryl compound [...] is at least one of [...]" . Such language implies that the aryl compound can be more than one at the same time. It is unclear how the aryl compound can be more than one moiety.

Claim 147 is further indefinite since claim 147 recites the limitation that "wherein the precursor aminophthalimide-linked diarylketene [...] is at

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least one of [...]. Such language implies that the precursor aminophthalimide-linked diarylketene can be more than one at the same time. It is unclear how the precursor aminophthalimide-linked diarylketene can be more than one moiety.

Claim 147 is further indefinite since claim 147 recites the limitation that "wherein the precursor of A-B [...] is at least one of [...]". Such language implies that the precursor of A-B can be more than one at the same time. It is unclear how the A-B precursor can be more than one moiety.

Claim 153 is further indefinite since claim 153 recites the limitation that "wherein the A-linked diarylketene [...] is at least one of [...]". Such language implies that the A-linked diarylketene can be more than one at the same time. It is unclear how the A-linked diarylketene can be more than one moiety.

Claim 153 is further indefinite since claim 153 recites the limitation that "wherein the precursor of A-B [...] is at least one of [...]". Such language implies that the precursor of A-B can be more than one at the same time. It is unclear how the A-B precursor can be more than one moiety.

Claim 155 is indefinite since it is unclear what is meant by "general steps" and "representative formula". For instance, can the reaction conditions be altered and still be deemed to follow the same general step? Furthermore, can the substituents on the "representative formula" be modified and still be considered a method that reads on claim 155? Such language does not clearly point out the subject matter instantly covered by claim 155.

Claim 156 is indefinite since it is unclear what is meant by "general steps" and "representative formula". For instance, can the reaction conditions be altered and still be deemed to follow the same general step? Furthermore, can the substituents on the "representative formula" be modified

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and still be considered a method that reads on claim 156? Such language does not clearly point out the subject matter instantly covered by claim 156.

Claim 157 is further indefinite since claim 157 recites the limitation "the molecular linker." There is insufficient antecedent basis for this limitation in the claim. Claim 157 only recites a "hydrocarbon linker".

Claim 159 is further indefinite since claim 159 recites the limitation that "wherein the halo-substituted diarylketene precursor [...] is at least one of [...]". Such language implies that the halo-substituted diarylketene precursor can be more than one at the same time. It is unclear how the halo-substituted diarylketene precursor can be more than one moiety.

Claim 159 is further indefinite since claim 159 recites the phrase "and the halo-substituted multiarylpolymethine dyes, such as [...]." It is unclear what Applicant is trying to claim in this phrase. There is no apparent limitation of the dyes and it is unclear why this phrase appears in claim 159.

Claim 161 is further indefinite since claim 161 recites the limitation that "wherein the [...] dye [...] is at least one of [...]". Such language implies that the dye can be more than one at the same time. It is unclear how the dye can be more than one moiety.

Claim 163 is further indefinite since claim 163 recites the limitation that "wherein A-B [...] is at least one of [...]". Such language implies that A-B can be more than one at the same time. It is unclear how A-B can be more than one moiety.

Claim 173 is further indefinite since claim 173 recites the limitation "tetraarylpolymethine dye." There is insufficient antecedent basis for this limitation in the claim. Claim 173 only recites a "multiarylpolymethine photochromic dye".

Claim 181 is indefinite since it is unclear what is meant by "general steps" and "representative formula". For instance, can the reaction conditions be altered and still be deemed to follow the same general step? Furthermore, can the substituents on the "representative formula" be modified and still be considered a method that reads on claim 181? Such language does not clearly point out the subject matter instantly covered by claim 181.

Claim 228 is further indefinite since claim 228 recites the limitation that "wherein the C moiety is at least one of [...]". Such language implies that the C moiety can be more than one at the same time. It is unclear how the C moiety can be more than one moiety.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

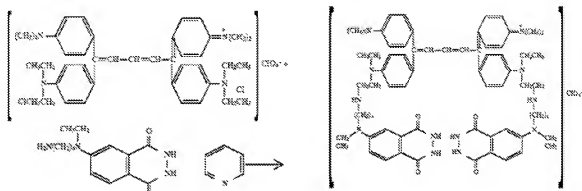
Claims 20, 25-30 and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,773,592 by Mills et al.

Mills et al. teach the synthesis of the following compound in columns 80-85:

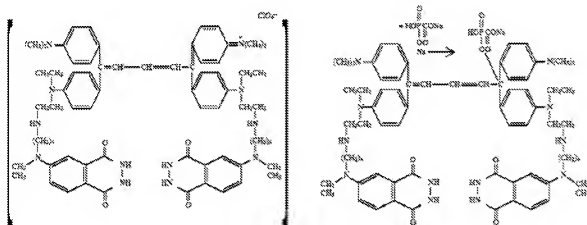
The species depicted below is embraced by Applicant's formula A-B-C as follows. A is a chemiluminescent moiety and is a phthalhydrazide, B is an energy acceptor moiety (a pentadiene) and C is sodium phosphonoformate. Furthermore, B is a photochromic compound, particularly a photochromic polymethine dye and has the same basic structure as 1,1,5,5-tetrakis-[4-(n,n-dimethylamine)phenyl]divinyl carbonium perchlorate as instantly recited in claim 30. In addition, the nucleophilic group that bonds to the B moiety (of claim 32) is a phosphonate group. With respect to claims 33-34, where the C moiety is derivatized to have a nucleophilic group (including phosphate groups in claim 34), the C moiety could also be considered formic acid, which is known to be an antibacterial agent, which has derivatized with a phosphate group.

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Mills et al. teach the following reaction step of "condensing A and B to form conjugate A-B in columns 80-81:



Mills et al. then teach the following reaction step of "reacting the conjugate A-B with C" in columns 84-85:



Allowable Subject Matter

Claim 172 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew P. Coughlin whose telephone number is (571)270-1311. The examiner can normally be reached on Monday through Thursday from 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew P. Coughlin/ Examiner, Art Unit 1626	/Rebecca L Anderson/ Primary Examiner, Art Unit 1626
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